

LOS INSECTOS DE LAS ISLAS JUAN FERNANDEZ

19. CHLOROPIDAE (Diptera)

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La especie citada por Enderlein como *Cadrema metallica* (Beck.) se describe aquí como *Hippelates australis* n. sp., que probablemente fué importada a Juan Fernández, pues se encuentra también en Chile, Argentina, Perú y Ecuador. Forma con *Hippelates flavipes* Loew e *H. pallipes* (Loew) un grupo íntimamente relacionado.

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The Diptera collected by Dr. G. Kuschel on the Juan Fernández Islands include only one species of the family Chloropidae, an eye gnat of the genus *Hippelates*, represented by eleven specimens collected at Bahía Cumberland on Masatierra Island. This species is the same as that found in the temperate and subtemperate parts of South America and hitherto identified by various authors either as *H. flavipes* Loew or *H. pallipes* (Loew). It appears to be common in central Chile, and was undoubtedly introduced into the Juan Fernández Islands from the mainland. After studying accumulated material from several sources, I have concluded that the species is distinct from either *flavipes* or *pallipes*, and it is accordingly described here as new. The types has been selected from a long series of both sexes from a mainland locality.

The only previous record of a chloropid from Juan Fernández was published by Enderlein (1940, Nat. Hist. Juan Fernández and Easter Island, vol. 3, p. 658), who recorded «*Cadrema metallica* (Beck.)» [*Hippelates*] from one male, Masatierra, July 30, 1917. However, this specimen, which I have examined in the Naturhistoriska Riksmuseum in Stockholm, is actually the new species described below. *Hippelates metallicus*, which is a synonym of *H. flaviceps* (Loew), is a distinct Neotropical species with mesonotum appearing rather bare because of the presence of only a median row of acrostichal hairs between the dorsocentrals.

***Hippelates australis* Sabrosky, new species**

Species with entirely yellow legs, small hind tibial spur, and body predominantly shining black, related to *H. pallipes* and *H. flavipes*.

Male.—Head black above and behind, anteriorly bright yellow, including anterior half of front, apex of frontal triangle, face, parafacial, cheek, palpus, and antenna except terminal portion of arista; frontal triangle predominantly polished black, with a sharp line of demarcation between the yellow apex and the remainder of the triangle. Thorax polished black except for inconspicuous, dark gray pollinose areas posteroventral to base of wing and on ventral surface of the scutellum; prosternum entirely shining black. Abdominal tergites polished black except for paler basal segment. Legs, including coxae, bright yellow except for black base of hind coxa. Wing hyaline, veins brown. Halter with lemon-yellow knob. Bristles and hind tibial spur generally black or dark brown, some occasionally yellowish brown.

Front in dorsal aspect nearly twice the width of an eye, approximately half width of head, and approximately as broad as long; frontal triangle equilateral to slightly longer than broad at base, with sides nearly straight or almost imperceptibly convex, its acute apex not reaching anterior margin of front; cheek broad, as in *H. pallipes*, one-fourth to three-tenths height of eye and two-thirds to three-fourths breadth of third antennal segment, entirely shining and non-pollinose, with a median finely striate section flanked by a narrow glossy area adjacent to eye, and a narrow oral margin which is polished but somewhat punctured.

Mesonotum as in *H. pallipes* and *H. flavipes*, sparsely haired in rows, the piliferous punctures fine and not interrupting the polished appearance, three rows of acrostichal hairs between the dorsocentrals and two to three irregular rows outside each dorsocentral position. Dorsum of scutellum without pollen, shining black, but more or less rugose and coarsely punctured, especially toward apex of scutellum.

Hind tibia not angulate distally, the hind tibial spur only slightly curved and closely appressed to apical portion of tibia; spur inserted nearly its own length before apex of tibia, the length equal to or slightly greater than tibial diameter at base of spur.

Female.—As described for male, except in head coloration, the head anteriorly not so bright yellow; frontal triangle polished black, sometimes yellowish to brown at extreme apex; front black on posterior three-fifths to two-thirds; cheek variably dark yellow to blackish brown; antenna black on dorsal third of third segment and distal portion of arista.

Length, 1.5 — 2 mm.

Holotype, male, and allotype, Bariloche, Río Negro, Argentina, November 1926 (R. & E. Shannon). Type N.º 62373 in the United States National Museum. Paratypes, 173 (46 ♂♂, 127 ♀♀) as follows:

ARGENTINA: 51 (19 ♂♂, 32 ♀♀), same data as type; 2 ♀♀, Correntoso, Río Negro, November 1926 (R. & E. Shannon) (USNM).

CHILE: 1 ♀, Valparaíso, Feb. 4, 1951 (G. Kuschel), 1 ♀, Punta Teatinos, Coquimbo, Sept. 16, 1952 (G. Kuschel); 7 (1 ♂, 6 ♀ ♀), Vallenar, Atacama, Sept. 18, 1952 (G. Kuschel) (Univ. de Chile, Santiago). 1 ♀, Valparaíso (Cockerell); 3 ♀ ♀, Angol, Feb. 7 and Mar. 3, 1941 (P. A. Berry); 1 ♀, Angol, Oct. 28, 1925; 4 (2 ♂ ♂, 2 ♀ ♀), Renaico, April 1, 1932 (D. S. Bullock); 4 ♂ ♂, Casa Pangué, Llanquihue, December 1926 (R. & E. Shannon) [USNM]. 4 ♀ ♀, Lake Ranco near Valdivia, Jan. 31, 1943 (E. Melland); 1 ♀, Lake Llanquihue, Feb. 14, 1943 (E. Melland); 2 ♀ ♀, Lake Rupanco, Feb. 5, 1943 (E. Melland) [British Museum (Nat. Hist.), through Commonwealth Inst. Ent.]. 23 (3 ♂ ♂, 20 ♀ ♀), Cauquenes, Jan. 6, 1900 and Feb., May, June and Nov., 1894 to 1900; 14 (5 ♂ ♂, 9 ♀ ♀), Contulmo, Jan. 15 and March 28, 1902, and April 27, May 8, 11, 13-15, 17, 1903; 2 (♂, ♀), San Francisco, Feb. 25, 1900; 3 ♂ ♂, Santiago, Feb. 9, 1900; 31 (5 ♂ ♂, 26 ♀ ♀), Rancagua, Feb. 9, 1900, and May 11, 12, 25, 31, June 11, 13, 24, July 12, Sept. 24, Nov. 4, 16, 21, 1901; 13 (3 ♂ ♂, 10 ♀ ♀), Parral, Jan., 1899 [Zool. Mus., Univ. Berlin; all collected by Schönemann, and all except San Francisco labeled «Mittel Chile»].

JUAN FERNÁNDEZ: 10 ♀ ♀, Bahía Cumberland, Masatierra, Feb. 24 and Mar. 1, 1951, Jan. 1 and 11, 1952 (G. Kuschel) [Univ. de Chile, Santiago].

ECUADOR: 1 ♀, Pomasqui, Oct. 16, 1953 (H. R. Yust) [USNM].

PERÚ: 1 ♀, Huancabamba, Aug. 13, 1945 (P. A. Berry) [USNM]. 1 ♂, Lima, Aug. 31, 1914 (H. S. Parish) [Cornell Univ.].

In addition to the type series, I have before me 63 specimens (16 ♂ ♂, 47 ♀ ♀) of the species in fair to poor condition, not labeled as paratypes. Two localities not represented in the type series are Cortaberal, Middle Chile, and Castro, Isla Chiloé, Chile.

The Bariloche, Casa Pangué, and Renaico specimens were recorded as *Cadrema pallipes* by Malloch in the «Diptera of Patagonia and South Chile», (1934, Part VI, fasc. 5, p. 410).

This species, the Neotropical *H. flavipes* Loew, and the Nearctic *H. pallipes* (Loew), form a small group of closely related species characterized by having legs entirely yellow (often a bright lemonyellow); prosternum black; hind tibial spur short, slightly curved, preapical, approximately equal to tibial diameter and more or less appressed to apex of tibia, the latter not angulate; mesonotum polished black with sparsely haired habitus, there being only three rows of acrostichal hairs between the dorsocentrals, or as often expressed, only one intermediate row of

hairs on each side between the median and each dorsocentral row; sexually dimorphic in head coloration, the males with head especially bright yellow anteriorly as described above, the apical portion of frontal triangle distinctly yellow with a rather sharp line of demarcation between it and the black remainder of triangle. The male genitalia of the three species are quite close, differing slightly in some proportions, with *pallipes* and *australis* more nearly alike. Because of all these characters, the three species are so similar that they were at one time considered to represent a single species, and the dimorphic males considered to be still another species.

Australis is closer to the Nearctic *pallipes* than to the Neotropical *flavipes*, but it differs from both in having the scutellum without pollen dorsally and on the sides, and the triangle shorter and with straighter sides. The shape of the triangle in particular gives a slightly but distinctly different habitus to the dorsal aspect of the head, although one which is difficult to express in definite terms. In *australis*, the ratio of length of triangle to width of front at vertex ranges from 0,92 to 1,00, with occasional specimens slightly more or less. In the Nearctic *pallipes* on the other hand, the ratio of length to width is 1,00 to 1,16. The ratio in *australis* is obviously not greatly different from that in *pallipes*, but when one combines that shorter length with the almost straight sides and the accordingly smaller proportion of smooth polished surface on the anterior half of the front, the resulting habitus of *australis* seems quite distinct. Approximately the same comparison holds between *australis* and *flavipes*. In the male, the apex of the frontal triangle is rarely as extensively yellow in *australis*, and thus that male is less strikingly different from its female than are the males of *flavipes* and *pallipes* from their females. Actually, the sharp line of demarcation between yellow and black is at about the same level on the front of all three species, but the shorter triangle of *australis* means a reduction in the polished yellow anterior area of the triangle. It is also my impression that in *australis* the mesonotal hairs are longer and paler and thus more conspicuous, and the hind tibial spur a trifle longer and stronger, than in the other two species, but the differences are not easily defined.

It is fortunate that the two species which are closest and therefore most likely to be confused in identification, *australis* and *pallipes*, are widely separated geographically by the intervening range of the Neotropical *flavipes*.

The following key has been constructed for convenience in identifying the three species:

1. Cheek sublinear, narrower than diameter of palpus, one-third breadth of third antennal segment, and one-ninth to one-tenth the eye height, silvery pollinose except for narrow oral margin; scutellum finely pollinose on entire surface; frontal

triangle extending to anterior margin of front, its sides obviously convex (Neotropical, Bahamas, and Central Mexico southward to Paraguay and southern Brazil).....

H. flavipes Loew

— Cheek broader, nearly twice or more the diameter of palpus, two-thirds to subequal breadth of third antennal segment, and one-fourth to three-tenths the eye height; cheek shining, not pollinose, with median finely striate area flanked above and below by polished areas, that next to eye especially smooth, highly glossy and conspicuous.....

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2. Scutellum finely pollinose on entire surface; frontal triangle proportionately long, its apex at or close to anterior margin of front and its sides slightly convex; in male, frontal triangle broadly yellow anteriorly (Nearctic).....

H. pallipes (Loew)

— Scutellum without pollen on dorsum and sides, shining, though more or less rugose and not as polished as mesonotum; frontal triangle broader and shorter, equilateral or slightly longer than broad at base, sides nearly straight or appearing so, and apex not reaching anterior margin of front; in male, apex of triangle less extensively yellow because of shorter triangle (Argentina and Chile northward in western South America to Peru and eastern Ecuador; Juan Fernández Islands).....

H. australis Sabrosky